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### Severe COVID 19 Case with Atypical Presentation

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## Introduction

COVID-19 was brought to the attention of the WHO on December 31<sup>st</sup>, 2019 and classified a global pandemic on March 11<sup>th</sup>.<sup>1</sup> As of April 27<sup>th</sup>, there were 38,210 cases and 3407 deaths in Michigan, with 8679 cases and 950 deaths in Detroit.<sup>2</sup> Efforts to characterize risk factors for severe disease may improve clinical outcomes and inform resource allocation. Better understanding of the epidemiological and clinical characteristics of COVID-19 are essential to slowing transmission and treating patients. Below we detail the clinical features of a COVID-19 positive patient seen in early March, 2020.

## Case Report

An 80-year-old female presented to the ED with fevers. She endorsed worsening fevers, watery diarrhea, abdominal pain, and myalgias for one week. She was lethargic and presyncopal for one day prior to presentation. She endorsed sick contacts at home and denied travel history. Her past medical history was significant for resected colon cancer, T2DM, COPD, HTN, and CAD. She was a former smoker. On exam she was febrile and had lower abdominal tenderness. Her labs showed lymphopenia, thrombocytopenia, and mild hyponatremia. Influenza swab, viral panel, and legionella urine antigen were negative, prompting COVID-19 testing. Chest x-ray showed diffuse reticular opacities (figure 1A,B).



Figure 1: Chest x-ray on admission showing bilateral reticular opacities A: lateral view. B: AP view

Antibiotics were started and she was admitted on hospital day 2. She developed dyspnea, rales, and increasing oxygen demand through her hospitalization. COVID-19 testing resulted positive by day 4. Infectious disease recommended ribavirin and lopinavir-ritonavir. Her son was informed, and all contacts were advised to isolate for two weeks. On days 5 and 6 she improved clinically, though was not discharged due to concern she would not abide by self-isolation recommendations. Overnight, she had increasing oxygen demand and repeat chest x-ray revealed worsening infiltrates (figure 2).

## Case Report



Figure 2: Portable AP view chest x-ray on the morning of hospital day 7 showing worsening reticular and interstitial opacities.

She was intubated and transferred to the MICU on day 7. Inflammatory markers including LDH, CRP, procalcitonin, lactate, anion gap, aPTT, INR, and D-dimer were elevated. ABG revealed low PaO<sub>2</sub> and low pH. Her IL-6 and fibrinogen levels were normal. She continued to decompensate with concern for septic shock, and had worsening bradycardia and hypotension, unresponsive to three vasopressors. On day 7, she expired

Table 1: Laboratory trends through course of hospital admission. Marked elevation of markers associated with morbidity and mortality on hospital days six and seven correlate to clinical deterioration.

	Illness Day							
	8	9	10	11	12	13	14	
	Hospital day							
	1	2	3	4	5	6	7	
White-cell count (K/ $\mu$ L)	3.5	3.7	4.6	5	5.9	11.5	7.7	
Absolute neutrophil count (K/ $\mu$ L)	2.2	2.9	3.6	3.9		9.8	7.47	
Absolute lymphocyte count (K/ $\mu$ L)	0.9	0.6	0.6	0.7		0.9	0.08	
Platelet count (K/ $\mu$ L)	87	79	91	115	129	140	106	
Hemoglobin (g/dL)	12.3	12.2	11.9	12.1	11.8	11.2	11	
Hematocrit (%)	39.6	38.3	37.3	37.9	37.5	36.5	33.7	
Sodium (mmol/L)	130	130	133	132	133	136	134	
Potassium (mmol/L)	4.5	4.1	4	4.3	4.4	4.4	4.2	
Chloride (mmol/L)	101	101	103	102	104	101	102	
Calcium (mg/dL)	8.7	8	8.1	8.6	7.9	9	8	
Bicarbonate (mmol/L)	20	21	23	23	20	16	22	
Anion Gap	9	7	7	7	9	19	10	
Glucose (mg/dL)	87	84	122	180	213	262	286	
BUN (mg/dL)	22	18	23	19	25	37	40	
Creatinine (mg/dL)	0.75	0.75	0.8	0.69	0.89	1.29	1.32	
Procalcitonin (ng/mL)		0.16				0.3		
Alanine aminotransferase (IU/L)						13	23	
Aspartate aminotransferase (IU/L)						34	56	
LDH (IU/L)						647	717	
PT (sec)							18.7	
INR							1.61	
PTT (sec)							45	
CPK (IU/L)							144	
Troponin (ng/L)	<18					21	64	
Lactate (mmol/L)	1.9						2.9	
D-Dimer ( $\mu$ g/mL)						>20	>20	
CRP (mg/dL)						11.2	11.9	
IL-6 (pg/mL)							<6	
Fibrinogen (mg/dL)							207	
COVID-19		Drawn		Positive				
Influenza A and B		Negative						
Legionella		Negative						
BioFire		Drawn		Negative				
Ferritin							211	
	12-Mar	13-Mar	14-Mar	15-Mar	16-Mar	17-Mar	18-Mar	
	Table Legend							
	Abnormal lab value							

Table 2: Vital signs and symptom progression through the course of illness.

	Illness Day							
	1 to 7	8	9	10	11	12	13	14
	Hospital day							
		1	2	3	4	5	6	7
Temperature ( $^{\circ}$ C)		37.9	38	37.7	37.4	37.5	36.8	37
Respiratory rate		18	20	18	18	20	20	30
SpO <sub>2</sub>		94%	91%	90%	89%	95%	100%	70%
Oxygen Device/Flow		None	None	None	4L NC	None	6L NC	15L NRB $\rightarrow$ Mechanical Ventilation
Cough	No	No	Yes	Yes	Yes	No	No	Sedated
Rhinorrhea	No	No	No	No	No	No	No	Sedated
Fatigue	Yes	Yes	Yes	Yes	Yes	No	No	Sedated
Nausea	No	No	No	No	No	No	No	Sedated
Vomiting	No	No	No	No	No	No	No	Sedated
Diarrhea	Yes	Yes	No	No	No	No	No	Sedated
Abdominal Pain	Yes	Yes	No	No	No	No	No	Sedated
Dyspnea/SOB	No	No	Yes	No	Yes	Yes	No	Yes
Myalgias	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Presyncope	No	Yes	No	No	No	No	No	Sedated
	12-Mar	13-Mar	14-Mar	15-Mar	16-Mar	17-Mar	18-Mar	
	Table Legend							
	Abnormal vital sign or pertinent positive							

## Discussion

Our report of a COVID-19 patient that ended in their mortality provides important lessons for providers. The transmission mode was community spread, reflecting high transmissibility among family groups.<sup>3,4</sup> Fevers are reliably present over the illness course, though seen in under half on presentation.<sup>5-7</sup> Fatigue is common and was observed in our patient. Cough is common, though was absent here. Diarrhea is an uncommon presenting symptom, reducing initial clinical suspicion and potentially delaying diagnosis.<sup>5-7</sup>

Other characteristics seen in our patient reflect a growing body of evidence supporting high rate of morbidity and mortality in patients with COVID-19. Such populations, including critically ill elderly population, require ICU level care, with marked lymphopenia on admission labs, and elevated inflammatory markers across their hospitalization.<sup>5-12</sup> Also, investigative treatments including Lopinavir-ritonavir, ribavirin, hydroxychloroquine, and azithromycin have yet to demonstrate clinical efficacy in large randomized controlled trials.<sup>13-16</sup>

Our patient reflected the highest risk category of patients admitted for COVID-19, and despite her improving clinical course she decompensated quickly. A high index of suspicion for decompensation could positively impact the hospital course of such patients, despite the lack of pharmacologic interventions to reverse or cure the disease.

## Conclusion

Our patient reflected the highest risk category of patients admitted for COVID-19, and despite her improving clinical course she decompensated quickly. A high index of suspicion for decompensation could positively impact the hospital course of such patients, despite the lack of pharmacologic interventions to reverse or cure the disease.

## Bibliography

- Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19). [https://www.who.int/publications-detail/report-of-the-who-china-joint-mission-on-coronavirus-disease-2019-\(covid-19\)](https://www.who.int/publications-detail/report-of-the-who-china-joint-mission-on-coronavirus-disease-2019-(covid-19)). Accessed March 24, 2020.
- Coronavirus - Michigan Data: <https://www.michigan.gov/coronavirus/0,9753,7-406-98163-520743--,00.html>. Accessed March 23, 2020.
- Chan JF-W, Yuan S, Kok K-H, et al. A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster. *The Lancet*. 2020;395(10223):514-523. doi:10.1016/S0140-6736(20)30154-9
- Yu P, Zhu J, Zhang Z, Han Y. A Familial Cluster of Infection Associated With the 2019 Novel Coronavirus Indicating Possible Person-to-Person Transmission During the Incubation Period. *J Infect Dis*. doi:10.1093/infdis/jiaa077
- Wang D, Hu B, Hu C, et al. Clinical Characteristics of 138 Hospitalized Patients With 2019 Novel Coronavirus-Infected Pneumonia in Wuhan, China. *JAMA*. 2020;323(11):1061-1069. doi:10.1001/jama.2020.1585
- Huang C, Wang Y, Li X, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *The Lancet*. 2020;395(10223):497-506. doi:10.1016/S0140-6736(20)30183-5
- Guan W, Ni Z, Hu Y, et al. Clinical Characteristics of Coronavirus Disease 2019 in China. *N Engl J Med*. February 2020. doi:10.1056/NEJMoa2002032
- Arentz M, Yim E, Klaff L, et al. Characteristics and Outcomes of 21 Critically Ill Patients With COVID-19 in Washington State. *JAMA*. March 2020. doi:10.1001/jama.2020.4326
- Grasselli G, Pesenti A, Cecconi M. Critical Care Utilization for the COVID-19 Outbreak in Lombardy, Italy: Early Experience and Forecast During an Emergency Response. *JAMA*. March 2020. doi:10.1001/jama.2020.4031
- Wu Z, McGoogan JM. Characteristics of and Important Lessons From the Coronavirus Disease 2019 (COVID-19) Outbreak in China: Summary of a Report of 72 314 Cases From the Chinese Center for Disease Control and Prevention. *JAMA*. February 2020. doi:10.1001/jama.2020.2648